

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-6 are pending in the present application. Claims 1, 5, and 6 have been amended without adding new matter by the present amendment.

In the outstanding Office Action, Claims 1-6 were rejected under 35 U.S.C. § 102(e) as anticipated by Shuman (U.S. Publication No. US 2003/0151783 A1), which is respectfully traversed.

Independent Claims 1 and 5 are amended to more clearly recite that each pixel of the multiplicity of pixels modulates “a corresponding light ray” such that the multiplicity of pixels spatially modulate a light intensity of a light beam that includes the corresponding light ray. In addition, Claims 1 and 5 are amended to recite that “the light transmissivity distribution or the light reflectivity distribution is achieved by the multiplicity of pixels without changing a direction of light rays within the light beam.” The claim amendments find support in the specification e.g. at page 9, paragraph [0024] and in Figure 1.

Briefly recapitulating, amended Claim 1 is directed to a spatial light modulator that includes a multiplicity of pixels arranged in a lattice form. The pixels select a transmission or reflection state and a blocking state of a corresponding light ray on each pixel to modulate a light intensity of a light beam that includes the corresponding light ray. Further, a light transmissivity distribution or a light reflectivity distribution is achieved by the multiplicity of pixels without changing a direction of light rays within the light beam. Independent Claim 5 recites similar limitations as in Claim 1.

In a non-limiting example, Figure 1 shows that a light beam 102 (with a non-uniform intensity distribution), which includes a plurality of light rays, acquires a uniform intensity distribution after the light beam 102 passes through the multiplicity of pixels 101a (see light

beam 103 having the uniform intensity distribution). Further, the multiplicity of pixels 101a does not change the direction of the light rays within the light beam.

Turning to the applied art, Shuman shows in Figure 3 an apodizer that changes twice the direction of each light ray 300 in a central region of the apodizer with a pair of lenses 302 and 304 to achieve a uniform light intensity at an output of the apodizer.¹ Therefore, Shuman does not teach or suggest (i) a spatial light modulator that uses pixels to modify the light transmissivity distribution or the light reflectivity distribution, and (ii) changing the light distribution of the light beam without changing a direction of the light rays within the light beam, as required by amended Claims 1 and 5. On the contrary, Shuman uses lenses (not pixels) to modify the intensity distribution of the light and also modifies the direction of the light rays within the light beam.

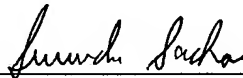
Accordingly, it is respectfully submitted that independent Claims 1 and 5 and each of the claims depending therefrom patentably distinguish over Shuman.

¹ Shuman, see paragraphs [0017] and [0055].

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Registration No. 25,599
Surinder Sachar
Registration No. 34,423
Attorneys of Record

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

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